poly(ethylene terephthalate) (PET) shall be in compliance with §63.1331 upon initial start-up or by September 12, 1999, whichever is later.

* * * * *

(d) * * *

(6) Notwithstanding paragraphs (d)(1) through (d)(4) of this section, existing affected sources whose primary product, as determined using the procedures specified in §63.1310(f), is PET shall be in compliance with §63.1331 no later than September 12, 1999.

* * * * *

2. At 64 FR 35028, June 30, 1999, §63.1311 was amended by revising paragraphs (b) and (c), effective Aug. 30, 1999. For the convenience of the user, paragraph (b) in effect from Aug. 9, 1999 until Aug. 30, 1999 and paragraph (c) is set forth as follows:

§ 63.1311 Compliance schedule and relationship to existing applicable rules.

* * * * *

(b) New affected sources that commence construction or reconstruction after March 29, 1995 shall be in compliance with this subpart upon initial start-up or September 12, 1996, whichever is later, as provided in §63.6(b), except that new affected sources whose primary product, as determined using the procedures specified in §63.1310(f), is PET shall be in compliance with §63.1331 upon initial start-up or February 27, 2001, whichever is later.

(c) Existing affected sources shall be in compliance with this subpart (except for §63.1331 for which compliance is covered by paragraph (d) of this section) no later than September 12, 1999, as provided in §63.6(c), unless an extension has been granted as specified in paragraph (e) of this section, except that the compliance date for the provisions contained in 40 CFR 63.1329 is temporarily extended from September 12, 1999, to February 27, 2001, for existing affected sources whose primary product, as determined using the procedures specified in §63.1310(f), is PET using a continuous terephthalic acid high viscosity multiple end finisher process.

* * * * *

§ 63.1312 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in §63.2, §63.101, §63.111, and §63.161 as specified after each term:

Act (§63.2)
Administrator (§63.2)
Automated monitoring and recording system (§63.111)
Average concentration (§63.111)
Boiler (§63.111)
Bottoms receiver (§63.161)
By compound (§63.111)
By-product (§63.101)
Car-seal (§63.111)
Chemical manufacturing process unit (§63.101)
Closed-vent system (§63.111)
Co-product (§63.101)
Combustion device (§63.111)
Commenced (§63.2)
Compliance date (§63.2)
Compliance schedule (§63.2)
Connector (§63.161)
Construction (§63.2)
Continuous monitoring system (§63.2)
Continuous record (§63.111)
Continuous recorder (§63.111)
Cover (§63.111)
Distillation unit (§63.111)
Emission standard (§63.2)
Emissions averaging (§63.2)
EPA (§63.2)
Equipment (§63.161)
Equipment leak (§63.101)
Existing source (§63.2)
External floating roof (§63.111)
Fill (§63.111)
Fixed roof (§63.111)
Flame zone (§63.111)
Flexible operation unit (§63.101)
Floating roof (§63.111)
Flow indicator (§63.111)
Group 1 wastewater streams (§63.111)
Group 2 wastewater streams (§63.111)
Halogens and hydrogen halides (§63.111)
Hazardous air pollutant (§63.2)
Impurity (§63.101)
In organic hazardous air pollutant service (§63.161)
Incinerator (§63.111)
Instrumentation system (§63.161)
Internal floating roof (§63.111)
Lesser quantity (§63.2)
Major source (§63.2)
Malfunction (§63.2)
Mass flow rate (§63.111)
Maximum true vapor pressure (§63.111)
New source (§63.2)
Open-ended valve or line (§63.161)
Operating permit (§63.101)
Organic HAP service (§63.161)
Organic monitoring device (§63.111)
Owner or operator (§63.2)
Performance evaluation (§63.2)
Performance test (§63.2)

Permitting authority (§ 63.2)
Plant site (§ 63.101)
Point of generation (§ 63.111)
Potential to emit (§ 63.2)
Primary fuel (§ 63.111)
Process heater (§ 63.111)
Process unit shutdown (§ 63.161)
Process wastewater (§ 63.101)
Process wastewater stream (§ 63.111)
Product separator (§ 63.111)
Reactor (§ 63.111)
Reconstruction (§ 63.2)
Recovery device (§ 63.111)
Reference control technology for process vents (§ 63.111)
Reference control technology for storage vessels (§ 63.111)
Reference control technology for wastewater (§ 63.111)
Relief valve (§ 63.111)
Research and development facility (§ 63.101)
Residual (§ 63.111)
Run (§ 63.2)
Secondary fuel (§ 63.111)
Sensor (§ 63.161)
Shutdown (§ 63.2)
Specific gravity monitoring device (§ 63.111)
Start-up (§ 63.2)
Start-up, shutdown, and malfunction plan (§ 63.101)
State (§ 63.2)
Surge control vessel (§ 63.161)
Temperature monitoring device (§ 63.111)
Test method (§ 63.2)
Total resource effectiveness index value (§ 63.111)
Treatment process (§ 63.111)
Unit operation (§ 63.101)
Visible emission (§ 63.2)
Waste management unit (§ 63.111)
Wastewater (§ 63.101)
Wastewater stream (§ 63.111)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in §§ 63.2, 63.101, 63.111, or 63.161 and in this section, it shall have the meaning given in this section for purposes of this subpart.

Acrylonitrile butadiene styrene latex resin (ABS latex) means ABS produced through an emulsion process, however the product is not coagulated or dried as typically occurs in an emulsion process.

Acrylonitrile butadiene styrene resin (ABS) means styrenic terpolymers consisting primarily of acrylonitrile, 1,3-butadiene, and styrene monomer units. ABS is usually composed of a styrene-acrylonitrile copolymer continuous phase with dispersed butadiene derived rubber.

Acrylonitrile styrene acrylate resin (ASA) means a resin formed using acrylic ester-based elastomers to impact-modify styrene acrylonitrile resin matrices.

Aggregate batch vent stream means a gaseous emission stream containing only the exhausts from two or more batch process vents that are ducted together before being routed to a control device that is in continuous operation.

Affected source is defined in § 63.1310(a).

Alpha methyl styrene acrylonitrile resin (AMSAN) means copolymers consisting primarily of alpha methyl styrene and acrylonitrile.

Average flow rate, as used in conjunction with wastewater provisions, is determined by the specifications in § 63.144(c); or, as used in conjunction with batch process vent provisions, is determined by the specifications in § 63.1323(e).

Batch cycle means the operational step or steps, from start to finish, that occur as part of a batch unit operation. Batch cycle limitation means an enforceable restriction on the number of batch cycles that can be performed in a year for an individual batch process vent.

Batch emission episode means a discrete emission venting episode associated with a single batch unit operation. Multiple batch emission episodes may occur from a single batch unit operation.

Batch process means a discontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of the process vary with time. Addition of raw material and withdrawal of product do not typically occur simultaneously in a batch process. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Batch process vent means a point of emission from a batch unit operation having a gaseous emission stream with annual organic HAP emissions greater than 225 kilograms per year. Batch process vents exclude relief valve discharges and leaks from equipment regulated under §63.1331.

Batch unit operation means a unit operation operated in a batch process mode.

Combustion device burner means a device designed to mix and ignite fuel and air to provide a flame to heat and oxidize waste organic vapors in a combustion device.

Compounding unit means a unit operation which blends, melts, and resolidifies solid polymers for the purpose of incorporating additives, colorants, or stabilizers into the final thermoplastic product. A unit operation whose primary purpose is to remove residual monomers from polymers is not a compounding unit.

Continuous process means a process where the inputs and outputs flow continuously through sequential manufacturing steps throughout the duration of the process. Continuous processes typically approach steady-state conditions. Continuous processes typically involve the simultaneous addition of raw material and withdrawal of product. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Continuous process vent means a point of emission from a continuous unit operation within an affected source having a gaseous emission stream containing greater than 0.005 weight percent total organic HAP. Continuous process vents exclude relief valve discharges and leaks from equipment regulated under §63.1331.

Continuous unit operation means a unit operation operated in a continuous process mode.

Control device is defined in §63.111, except that the term ''process vents'' shall be replaced with the term ''continuous process vents subject to §63.1315'' for the purpose of this subpart.

Drawing unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then pulling it through an orifice to create a continuously extruded product.

Emission point means an individual continuous process vent, batch process vent, storage vessel, wastewater stream, equipment leak, heat exchange system, or process contact cooling tower.

Emulsion process means a process carried out with the reactants in an emulsified form (e.g., polymerization reaction).

Expandable polystyrene resin (EPS) means a polystyrene bead to which a blowing agent has been added using either an in-situ suspension process or a post-impregnation suspension process.

Extruding unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then forcing it through an orifice to create a continuously extruded product.

Group 1 batch process vent means a batch process vent releasing annual organic HAP emissions greater than the level specified in §63.1323(d) and with a cutoff flow rate, calculated in accordance with §63.1323(f), greater than or equal to the annual average flow rate.

Group 2 batch process vent means a batch process vent that does not fall within the definition of a Group 1 batch process vent.

Group 1 continuous process vent means a continuous process vent releasing a gaseous emission stream that has a total resource effectiveness index value, calculated according to §63.115, less than or equal to 1.0 unless the continuous process vent is associated with existing thermoplastic product process units that produce methyl methacrylate butadiene styrene resin, then said vent falls within the Group 1 definition if the released emission stream has a total resource effectiveness index value less than or equal to 3.7.

Group 2 continuous process vent means a continuous process vent that does not fall within the definition of a Group 1 continuous process vent.

Group 1 storage vessel means a storage vessel at an existing affected source that meets the applicability criteria specified in Table 2 or Table 3 of this

subpart, or a storage vessel at a new affected source that meets the applicability criteria specified in Table 4 or Table 5 of this subpart.

Group 2 storage vessel means a storage vessel that does not fall within the definition of a Group 1 storage vessel.

Halogenated aggregate batch vent stream means an aggregate batch vent stream determined to have a total mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated batch process vent means a batch process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated continuous process vent means a continuous process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures specified in § 63.115(d)(2)(v).

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water) designed and operated to not allow contact between the cooling medium and process fluid or gases (i.e., a noncontact system). A heat exchange system can include more than one heat exchanger and can include recirculating or once-through cooling systems.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the TPPU into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewater include descaling of heat exchanger tubing bundles, cleaning distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, reactor and equipment washdown, and draining of portions of the TPPU for repair.

Mass process means a process carried out through the use of thermal energy (e.g., polymerization reaction). Mass processes do not utilize emulsifying or suspending agents, but can utilize catalysts or other additives.

Material recovery section means the equipment that recovers unreacted or by-product materials from any process section for return to the TPPU, off-site purification or treatment, or sale. Equipment used to store recovered materials are not included. Equipment designed to separate unreacted or by-product material from the polymer product are to be included in this process section, provided that at the time of initial compliance some of the material is recovered for reuse in the process, off-site purification or treatment, or sale. Otherwise, such equipment are to be assigned to one of the other process sections, as appropriate. If equipment are used to recover unreacted or by-product material and return it directly to the same piece of process equipment from which it was emitted, then said recovery equipment are considered part of the process section that contains the process equipment. On the other hand, if equipment are used to recover unreacted or by-product material and return it to a different piece of process equipment in the same process section, said recovery equipment are considered part of a material recovery section. Equipment that treats recovered materials are to be included in this process section, but equipment that also treats raw materials are not to be included in this process section. The latter equipment are to be included in the raw materials preparation section. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are not included in the material recovery section; they are to be included in the polymerization reaction section. Equipment used for the on-site recovery of ethylene glycol *and* other materials (e.g., methanol) from PET plants are not included in the material recovery section; these equipment are to be included in the polymerization reaction section.

Methyl methacrylate acrylonitrile butadiene styrene resin (MABS) means styrenic polymers containing methyl

methacrylate, acrylonitrile, butadiene, and styrene. MABS is prepared by dissolving or dispersing polybutadiene rubber in a mixture of methyl methacrylate-acrylonitrile-styrene and butadiene monomer. The graft polymerization is carried out by a bulk or a suspension process.

Methyl methacrylate butadiene styrene resin (MBS) means styrenic polymers containing methyl methacrylate, butadiene, and styrene. Production of MBS is achieved using an emulsion process in which methyl methacrylate and styrene are grafted onto a styrene-butadiene rubber.

Nitrile resin means a resin produced through the polymerization of acrylonitrile, methyl acrylate, and butadiene latex using an emulsion process.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 6 of this subpart or any other chemical which is:

(1) Knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as Title V or the Emergency Planning and Community Right-To-Know Act section 311, 312, or 313; and

(2) Listed in Table 2 of subpart F of this part.

PET using a dimethyl terephthalate process means the manufacturing of PET based on the esterification of dimethyl terephthalate with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

PET using a terephthalic acid process means the manufacturing of PET based on the esterification reaction of terephthalic acid with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

Poly(ethylene terephthalate) resin (PET) means a polymer or copolymer comprised of at least 50 percent bis-(2-hydroxyethyl)-terephthalate by weight.

Polymerization reaction section means the equipment designed to cause monomer(s) to react to form polymers, including equipment designed primarily to cause the formation of short polymer chains (e.g., oligomers or low polymers), but not including equipment designed to prepare raw materials for polymerization (e.g., esterification vessels). For the purposes of these standards, the polymerization reaction section begins with the equipment used to transfer the materials from the raw materials preparation section and ends with the last vessel in which polymerization occurs. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are included in this process section, rather than in the material recovery process section.

Polystyrene resin means a thermoplastic polymer or copolymer comprised of at least 80 percent styrene or para-methylstyrene by weight.

Primary product is defined in and determined by the procedures specified in § 63.1310(f).

Process contact cooling tower system means a cooling tower system that is designed and operated to allow contact between the cooling medium and process fluid or gases.

Process section means the equipment designed to accomplish a general but well-defined task in polymers production. Process sections include, but are not limited to, raw materials preparation, polymerization reaction, and material recovery. A process section may be dedicated to a single TPPU or common to more than one TPPU.

Process unit means a collection of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture a product.

Process vent means a point of emission from a unit operation having a gaseous emission stream. Typical process vents include condenser vents, dryer vents, vacuum pumps, steam ejectors, and atmospheric vents from reactors and other process vessels, but do not include pressure relief valves.

Product means a compound or material which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Raw materials preparation section means the equipment at a polymer manufacturing plant designed to prepare raw materials, such as monomers and solvents, for polymerization. For

the purposes of these standards, this process section begins with the equipment used to transfer raw materials from storage and/or the equipment used to transfer recovered material from the material recovery process sections, and ends with the last piece of equipment that prepares the material for polymerization. The raw materials preparation section may include equipment that is used to purify, dry, or otherwise treat raw materials or raw and recovered materials together; to activate catalysts; and to promote esterification including the formation of some short polymer chains (oligomers). The raw materials preparation section does not include equipment that is designed primarily to accomplish the formation of oligomers, the treatment of recovered materials alone, or the storage of raw materials.

Recovery operations equipment means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation unit, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

Solid state polymerization unit means a unit operation which, through the application of heat, furthers the polymerization (i.e., increases the intrinsic viscosity) of polymer chips.

Steady-state conditions means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values can occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP and that has been assigned, according to the procedures in §63.1310(g), to a TPPU that is subject to this subpart. Storage vessels do not include:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without breathing or working losses to the atmosphere;

(3) Vessels with capacities smaller than 38 cubic meters;

(4) Vessels and equipment storing and/or handling material that contains no organic HAP and/or organic HAP as impurities only; and

(5) Wastewater storage tanks.

Supplemental combustion air means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air.

Styrene acrylonitrile resin (SAN) means copolymers consisting primarily of styrene and acrylonitrile monomer units.

Suspension process means a process carried out with the reactants in a state of suspension, typically achieved through the use of water and/or suspending agents (e.g., polymerization reaction).

Thermoplastic product means one of the following types of products:

(1) ABS latex;

(2) ABS using a batch emulsion process;

(3) ABS using a batch suspension process;

(4) ABS using a continuous emulsion process;

(5) ABS using a continuous mass process;

(6) ASA/AMSAN;

(7) EPS;

(8) MABS;

(9) MBS;

(10) nitrile resin;

(11) PET using a batch dimethyl terephthalate process;

(12) PET using a batch terephthalic acid process;

(13) PET using a continuous dimethyl terephthalate process;

(14) PET using a continuous terephthalic acid process;

(15) PET using a continuous terephthalic acid high viscosity multiple end finisher process;

(16) Polystyrene resin using a batch process;

(17) Polystyrene resin using a continuous process;

(18) SAN using a batch process; or

(19) SAN using a continuous process.

Thermoplastic product process unit (TPPU) means a collection of equipment assembled and connected by process pipes or ducts, excluding gas, sanitary sewage, water (i.e., not wastewater), and steam connections, used to process raw materials and to manufacture a thermoplastic product as its primary product. This collection of equipment includes process vents from process vessels; storage vessels, as determined in § 63.1310(g); and the equipment (i.e., pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are associated with the thermoplastic product process unit) that are subject to the equipment leak provisions as specified in § 63.1331.

Total organic compounds (TOC) means those compounds excluding methane and ethane measured according to the procedures of Method 18 or Method 25A, 40 CFR part 60, appendix A.

Year means any consecutive 12-month period or 365 rolling days. For the purposes of emissions averaging, the term year applies to any 12-month period selected by the facility and defined in its Emissions Averaging Plan. For the purposes of batch cycle limitations, the term year applies to the 12-month period defined by the facility in its Notification of Compliance Status.

[61 FR 48229, Sept. 12, 1996, as amended at 64 FR 11547, Mar. 9, 1999]

§ 63.1313 Emission standards.

(a) Except as allowed under paragraphs (b) and (c) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:

(1) Section 63.1314 for storage vessels;

(2) Sections 63.1315 or 63.1316 through 63.1320, as appropriate, for continuous process vents;

(3) Section 63.1321 for batch process vents;

(4) Section 63.1328 for heat exchange systems;

(5) Section 63.1329 for process contact cooling towers;

(6) Section 63.1330 for wastewater;

(7) Section 63.1331 for equipment leaks;

(8) Section 63.1333 for additional test methods and procedures;

(9) Section 63.1334 for parameter monitoring levels and excursions; and

(10) Section 63.1335 for general recordkeeping and reporting requirements.

(b) Instead of complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, batch process vents, continuous process vents, and wastewater streams within the affected source to different levels using an emissions averaging compliance approach that uses the procedures specified in § 63.1332. An owner or operator electing to use emissions averaging must still comply with the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330 for affected source emission points not included in the emissions average.

(c) A State may decide not to allow the use of the emissions averaging compliance approach specified in paragraph (b) of this section.

§ 63.1314 Storage vessel provisions.

(a) This section applies to each storage vessel that belongs to an affected source, as determined by § 63.1310(g). Except as provided in paragraphs (b) through (d) of this section, the owner or operator of said storage vessels shall comply with the requirements of §§ 63.119 through 63.123 and 63.148, with the differences noted in paragraphs (a)(1) through (a)(16) of this section for the purposes of this subpart.

(1) When the term ''storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(2) When the term ''Group 1 storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(3) When the term ''Group 2 storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(4) When the emissions averaging provisions of § 63.150 are referred to in §§ 63.119 and 63.123, the emissions averaging provisions contained in § 63.1332